Materials Science and Engineering Laboratory
Polymers Division

NIST National Institute of Standards and Technology

SEMINAR ANNOUNCEMENT

Biocatalytic Approaches to Materials Science: Progress Made on Multiple Fronts

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Enzymes have traditionally been used in biochemical studies, molecular biology and related scientific explorations. Today, the use of biocatalysts in chemical synthesis is on the verge of significant growth producing unique materials for diverse applications. Since the advent of advance biotech tools, an interdisciplinary approach to research accelerates the progress on 2 key fronts: (i) the expansion of biological designs and (ii) the architectural design of polymeric materials with unique properties.

Unfortunately, the enzyme discovery-development process requires years of R&D to reach commercialization. Therefore, having knowledge of the performance characteristics and desired properties in the early stages of research is crucial for sharpening enzyme and materials developmental efforts. The application of HTS, combinatorial catalysis, and miniature bioprocesses, has proven advantageous as a platform for accelerating such R&D. This presentation will discuss the discovery of different enzyme-catalyzed routes to polymeric materials and the structure-properties-function of these materials.

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2:00 p.m.

Bldg 224/A312

For further details see Eric J. Amist